

**REMARKS**

In accordance with the foregoing, the specification and claims have been amended to improve clarity and to more distinctly point out what the inventors consider to be their invention. No new matter is presented in the foregoing amendments, approval and entry of same is respectfully requested.

The Examiner has requested a statement with Applicants' signature providing a complete post office address for each applicant. A quick review of the Combined Declaration/Power of Attorney for Utility/Design Patent Application filed with the application shows that the Post Office address is listed as "ditto." As the Examiner is undoubtedly aware this is an English language equivalent for the term --same as above--, which the Patent Office is in the habit of regularly accepting. Accordingly, Applicants respectfully submit that the Post Office address is the same as the residence and is clearly indicated as such on the Combined Declaration/Power of Attorney. Accordingly, Applicants respectfully request the Examiner withdraw this requirement.

Claims 1-4 stand rejected under 35 U.S.C. §103(a) as being unpatentable over Mizuno et al. in view of Casler, Jr. and Ramsey et al.

The present invention claims a method for teaching a welding torch orientation which does not require an orientation to be manually entered for each and every position along a weld line. Specifically, one of a forward angle and an inclination angle of a welding torch is input for each section. Thereafter, the incline angle for the entire weld is calculated in software. In other words, only one angle needs to be input for each section and the multiple angles that are required to go around each corner on the section is automatically calculated by software.

Conversely, Mizuno et al. deals with a different type of weld, a weaving weld. In Mizuno et al., it is a weaving swing plane that is calculated. The actual orientation of the welder is detected, as opposed to calculated, see col. 6, lines 22-23 (as cited

by the Examiner). In other words, each of the orientations is taught to the welder as is set forth in the prior art section of the present invention. Mizuno et al. does not teach the calculation of a desired torch orientation about the joints between two straight line sections of a weld. Nor is this type of calculation suggested by Mizuno et al.

The Examiner is citing Casler Jr. and Ramsey et al. as teaching a method of setting auxiliary points (Casler Jr.) and software calculation according to the arrangement of the points (Ramsey et al.). Looking at Figures 4 and 5, of Casler Jr. the welding line being described is a continuous curve, and as such has no junction points. Looking at Figures 6 and 7 which disclose how Casler Jr. deals with junction points, it can be seen that the junction point itself is not stored, but only points around the intersection in addition to an angle of the intersection are stored. As such, Casler Jr. does not deal with junction points. Further, Casler Jr. does not cure the defects noted above in Mizuno et al., specifically the calculation, in software, of a desired torch angle for the length of each section. Ramsey et al. is only disclosed as showing the calculation and software for the welding units. As such, if the methods of Casler Jr. and Mizuno et al. were combined and then placed in software in accordance with Ramsey et al., it would still not teach the calculating, in software, of a desired torch orientation for the length of each section.

In accordance with the foregoing, Applicants respectfully request that the Examiner withdraw his rejection to claims 1-4 under 35 U.S.C. §103.

Applicants note that the Examiner has indicated claim 5 as being allowable over the prior art of record.

In accordance with the foregoing it is respectfully submitted that all outstanding objections and rejections have been overcome and/or rendered moot. And further, that all pending claims patentably distinguish over the prior art, taken in any proper combination. Thus, there being no further outstanding objections or rejections, the

application is submitted as being in condition for allowance which action is earnestly solicited.

If the Examiner has any remaining informalities to be addressed, it is believed that prosecution can be expedited by the Examiner contacting the undersigned attorney for a telephone interview to discuss resolution of such informalities.

If any further fees are required in connection with the filing of this Amendment, please charge same to our Deposit Account No. 19-3935.

Respectfully submitted,

STAAS & HALSEY



Date: December 3, 1997

By:

Gerald P. Joyce III  
Registration No. 37,648

STAAS & HALSEY  
700 Eleventh Street, N.W.  
Suite 500  
Washington, D.C. 20001  
(202) 434-1500